

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously presented) A piezoelectric transducer drive circuit driving a piezoelectric transducer boosting an alternating voltage applied intermittently to a pair of primary electrodes and outputting the boosted alternating voltage from a secondary electrode, comprising:

a detection circuit detecting a signal indicating a state of a load connected to the secondary electrode and outputting one of a peak voltage and an average voltage thereof;

an error amplification circuit comparing the output voltage of the detection circuit with an error reference voltage and outputting a voltage according to a difference therebetween; and

a voltage-controlled oscillator controlled by the output voltage of the error amplification circuit and generating a clock determining a frequency of the alternating voltage applied to said primary electrodes,

wherein said error amplification circuit controls the voltage-controlled oscillator such that, when a voltage-applying operation is stopped in an intermittent operation and thereafter the voltage-applying operation is started, said frequency of the alternating voltage is always gradually reduced from a high point and stabilized.

2. (Currently Amended) The piezoelectric transducer drive circuit according to claim 1, wherein said error amplification circuit includes:

a differential operational amplifier comparing the output voltage of the detection circuit supplied to one input terminal (~~EIN~~) via a resistor with said error reference voltage

supplied to the other input terminal, amplifying a differential voltage, and outputting the amplified differential voltage;

a variable current source controlled by the differential operational amplifier;

a constant current source and a switch means connected in series with the variable current source between a power supply voltage and a ground voltage; and

a capacitor having opposite ends connected to an output of the variable current source and to the one input terminal of the differential operational amplifier, and

wherein said switch means becomes nonconductive when the voltage-applying operation is stopped in the intermittent operation, and becomes conductive when the voltage-applying operation is performed; and said error reference voltage has a first value when the voltage-applying operation is stopped in the intermittent operation, and gradually transits to a second value when the voltage-applying operation is started.

3. (Previously presented) A cold cathode tube lighting device comprising a piezoelectric transducer drive circuit driving a piezoelectric transducer boosting an alternating voltage applied intermittently to a pair of primary electrodes and outputting the boosted alternating voltage from a secondary electrode, said piezoelectric transducer drive circuit comprising:

a detection circuit detecting a signal indicating a state of a load connected to the secondary electrode and outputting one of a peak voltage and an average voltage thereof;

an error amplification circuit comparing the output voltage of the detection circuit with an error reference voltage and outputting a voltage according to a difference therebetween; and

a voltage-controlled oscillator controlled by the output voltage of the error amplification circuit and generating a clock determining a frequency of the alternating voltage applied to said primary electrodes,

said error amplification circuit controlling the voltage-controlled oscillator such that, when a voltage-applying operation is stopped in an intermittent operation and thereafter the voltage-applying operation is started, said frequency of the alternating voltage is always gradually reduced from a high point and stabilized,

wherein said cold cathode tube lighting device further comprises:
the piezoelectric transducer driven by the piezoelectric transducer drive circuit to boost the alternating voltage applied intermittently to the pair of primary electrodes and outputting the boosted alternating voltage from the secondary electrode;
a cold cathode tube connected as a load to the secondary electrode of the piezoelectric transducer; and
an impedance device connected in series with the cold cathode tube to allow the detection circuit of the piezoelectric transducer drive circuit to detect the signal indicating the state of the load connected to the secondary electrode.

4. (Currently Amended) The cold cathode tube lighting device according to claim 3, wherein said error amplification circuit includes:

a differential operational amplifier comparing the output voltage of the detection circuit supplied to one input terminal (~~EIN~~) via a resistor with said error reference voltage supplied to the other input terminal, amplifying a differential voltage, and outputting the amplified differential voltage;

a variable current source controlled by the differential operational amplifier;

a constant current source and a switch means connected in series with the variable current source between a power supply voltage and a ground voltage; and

a capacitor having opposite ends connected to an output of the variable current source and to the one input terminal of the differential operational amplifier, and

wherein said switch means becomes nonconductive when the voltage-applying operation is stopped in the intermittent operation, and becomes conductive when the voltage-applying operation is performed; and said error reference voltage has a first value when the voltage-applying operation is stopped in the intermittent operation, and gradually transits to a second value when the voltage-applying operation is started.